IMPLEMENTING ADEQ'S NONPOINT SOURCE 5-YEAR PLAN

State Fiscal Year 2016 Annual Report

ADEQ Arizona Department of Environmental Quality

DEVELOPED BY THE ADEQ WATER QUALITY DIVISION // SURFACE WATER SECTION // WATERSHED PROTECTION UNIT

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Arizona's Nonpoint Source Management Plan FY16 Annual Report

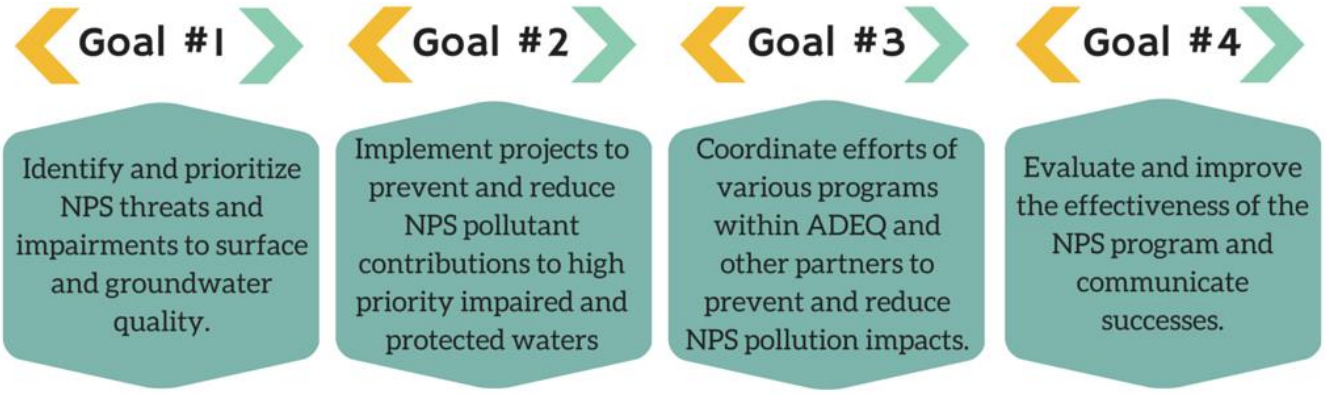
STRATEGIC PLANNING FOR MEETING WATER QUALITY PROTECTION AND RESTORATION GOALS RELATED TO NONPOINT SOURCE POLLUTION.

I. Introduction

The Arizona Nonpoint Source (NPS) Annual Report for state fiscal year 2016 (FY16) summarizes Arizona Department of Environmental Quality (ADEQ) NPS Program activities that occurred between July 1, 2015 and June 30, 2016. The state's FY16 Work Plan Output Report, submitted to EPA in August 2016, also documents FY16 NPS-funded activities and is a companion document to this report.

The majority of work performed by ADEQ's NPS Program is funded by Clean Water Act Section 319(h) grant monies, awarded by the U.S. Environmental Protection Agency (EPA). Section 319(h) (11) requires states to report annually on progress in meeting the schedule of milestones contained in their Nonpoint Source Management Plans. It also requires, to the extent possible, report reductions in nonpoint source pollutant loadings and improvements in water quality resulting from program implementation. For more information about Arizona's NPS Program's goals and structure for the FY15-19 reporting period, please refer to the FY15-FY19 5-Year Plan.

The FY15-19 NPS 5-Year Plan has four broad goals, summarized below:



The NPS-funded activities of each fiscal year within the five-year planning horizon must move ADEQ closer toward achieving these goals. The Strategic Plan Update Table (Section III of this document) details FY16 strides towards meeting these goals, and indicates whether they are on track for completion. A similar format will be used to report on annual progress for the remaining three years of the current NPS plan.

II. Executive Summary: A Snapshot of Our Progress

To make this report as useful as possible as both an evaluation tool for EPA and a planning tool for ADEQ, each milestone in the Strategic Plan Update Table was evaluated based both on whether it was on track for the *given year* and whether it was on track for the *overall 5-year planning period*. This allows staff to identify when additional resources may be needed to keep a milestone on track over a period of several years, and plan accordingly for the following fiscal year.

Milestone updates provide information via text the status *for the given reporting year*. Milestones are identified as either "not applicable" (no activity for the reporting year), "not initiated" (activity was planned but did not occur in the reporting year), "in progress" (activity took place in the reporting year and will be completed in a later year, or the task recurs each fiscal year), or "complete" (task is fully completed for the entire 5-year planning horizon).

In addition, status updates are color-coded to denote whether they are on track relative to the *overall 5-year planning period.* Milestones are identified as either on track ( ), off track ( ), or, at risk of falling off track ( ).

The yellow, or "at risk" status update indicates that while the task may currently be on track (or is not yet due to have been initiated), ADEQ is aware of issues that could threaten the ability of the project to stay on track. The particulars will be clarified in the comments below the related milestone task.

ADEQ was successful in staying on track with 89% of the milestones established in the 5-year plan during state FY16. Of that 89%, 9% were identified as at risk for falling behind schedule in coming years if additional focus and/or resources are not applied. Only 11% of all milestones were considered "off track" at the end of FY16.

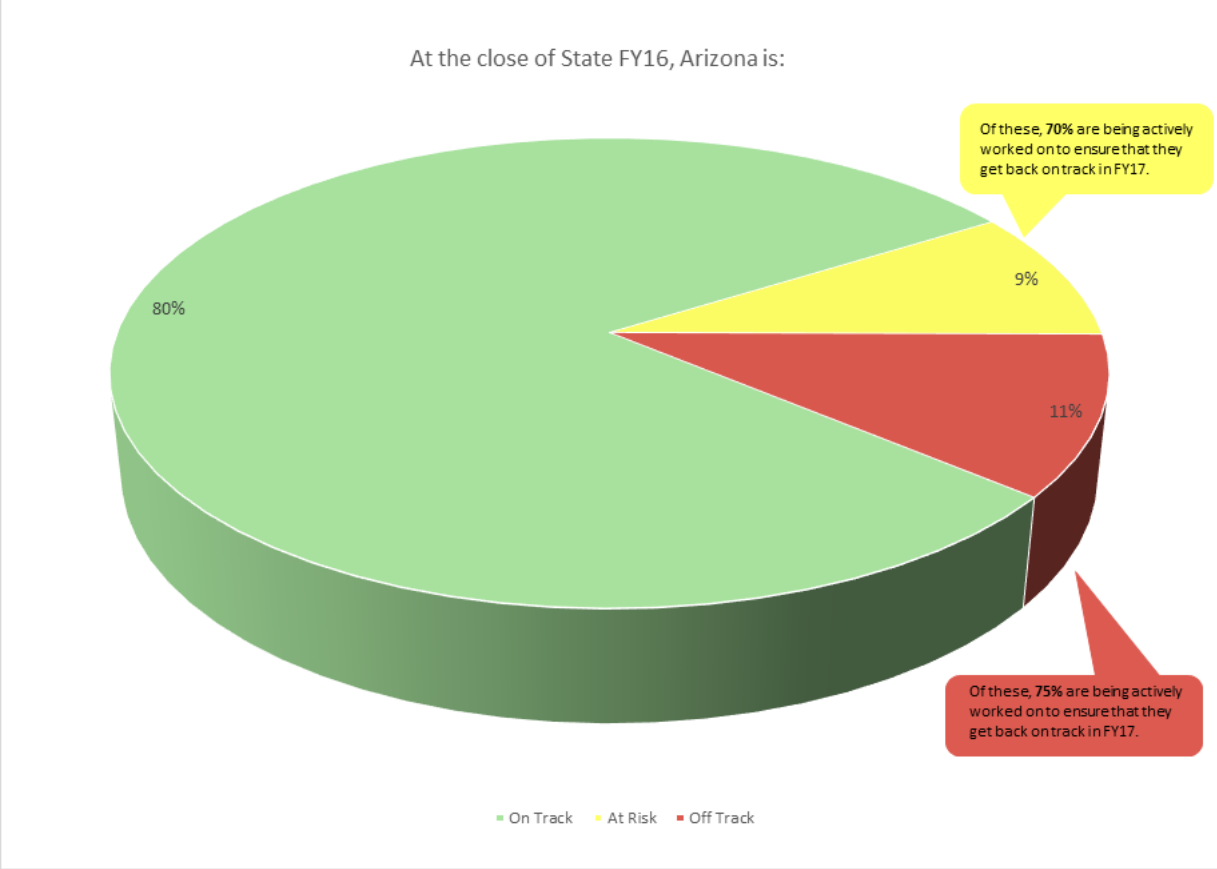


Figure 1: 89% of ADEQ's NPS goals are on track at the close of FY16.

Some highlights from FY16 include:

- Interagency teamwork to gather and analyze data for TMDLs and long term watershed planning continue in the Santa Cruz River, Granite Creek, and San Pedro River watersheds.
- TMDLs for the Middle Gila River, Granite Creek, and Watson Lake were completed by ADEQ and approved by EPA.
- Improving water quality through partnerships with the Arizona Game and Fish Department and the Apache Natural Resources Conservation District. These partnership agreements allowed for multiple on-the-ground improvements projects across the targeted watersheds.
- Watershed Protection Unit staff worked with local and state-level NRCS staff to secure information about NWQI project activities and locations for a total of 5 NWQI projects during FY16. BMP evaluations were completed on two of these projects, one project awaits environmental clearance before proceeding. Post-construction monitoring is planned for the others.

- Effectiveness monitoring of these NWQI projects was included in the development of sampling plans for both the Upper Little Colorado River and San Pedro River watersheds. Staff established monitoring protocols for brush treatment and sediment basin BMP evaluations, collected baseline and post-treatment data. Subsequent years data will be used to develop BMP guidance since effects on recent treatments are only now starting to manifest themselves. In the interim, staff are working with retired NRCS staffer to develop guidance for evaluating site potential for brush treatment BMPs.
- Volunteer training and data collection increased in 2016 with the continued support of U of A staff and the Watershed Protection Unit. University of Arizona outreach support increased and together we reached 492 Arizona stakeholders in FY 16.
- Development of Protection Criteria documentation that will allow 319 funds to be spent on protection projects in future grant cycles.

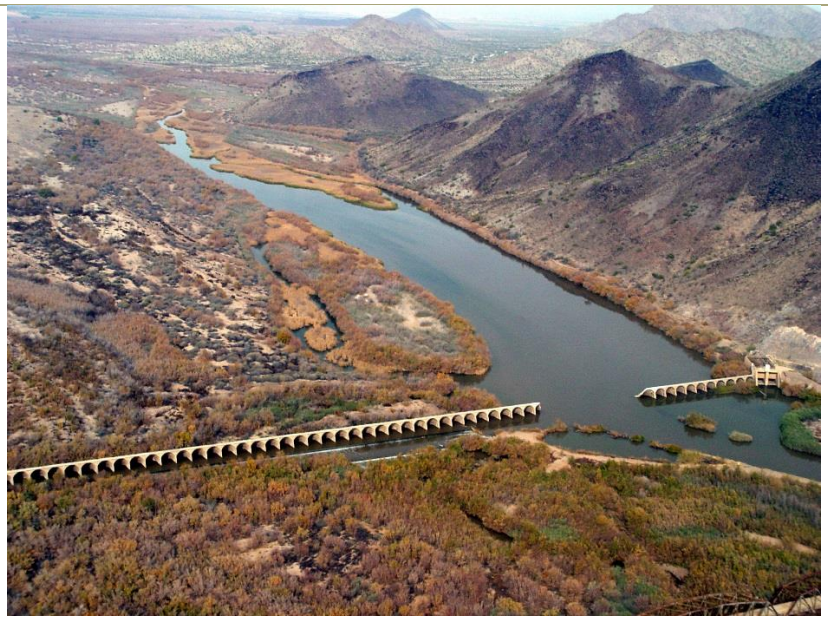


Figure 3: TMDLs were completed for Granite Creek, Watson Lake, and Middle Gila River (pictured above)

- ADEQ's Water Quality Division has a goal to improve water quality in 50% of monitored waters over a 5 year period (FY14-16). "Monitored waters" is defined as waters that are included on ADEQ's Master Target List (MTL) (Appendix A). At the beginning of state fiscal year 17, the Performance Measure goals changed to "Number of impaired waters on ADEQ's priority waters list showing improvement" and "Reduce the number of waterbodies that are not meeting surface water quality standards". Figure 4 shows the number of MTL waters monitored each month in FY16, the number of those that showed improvement based on ADEQ's Water Quality Index, and the corresponding percent improved for each month. At the end of FY16, ADEQ has documented improvement in 74% of MTL waters.

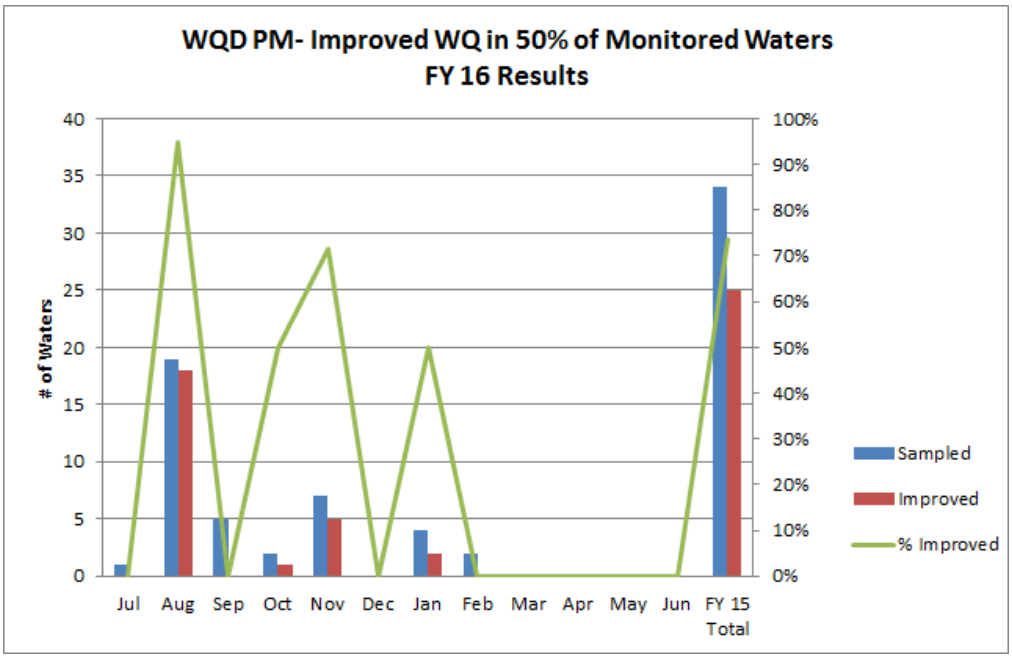


Figure 4: Monthly progress toward meeting the WQD performance measure to improve water quality in 50% of monitored waters.

III. Strategic Plan Update Table

GOAL #1: IDENTIFY AND PRIORITIZE NPS THREATS AND IMPAIRMENTS TO SURFACE AND GROUNDWATER QUALITY

Objective a: Assess water quality of surface and groundwater.

Strategy i: Conduct statewide surface and groundwater monitoring according to ADEQ's monitoring strategy and analyze data to fulfill requirements of the Clean Water Act and state water statutes.

Milestones:

1. Identify potential NPS contributions to surface and groundwater.

a.	Submit Integrated 305(b)/303(d) Report and assessment database to EPA.	(FY16, 18)	In Progress

Comments

The 2016 Integrated Report and 303(d) impaired waters list entered the 45 day public comment period on June 13, 2016. Public comment period closes in Q1 FY17. After management approval, the 2016 Integrated Report will be submitted to the Arizona Administrative Register. Comments from EPA will be incorporated and the 2016 Integrated Report is expected to be finalized in December 2016.

2. Increase probabilistic monitoring on intermittent streams.

a.	Program development.	(FY15, 16)	Complete
b.	Increased monitoring of intermittent streams (25 sites).	(FY17, 18, 19)	In Progress

Comments

a. Pilot testing of flow sensors on known intermittent streams was completed Nov 2014. Randomized network of flow sensors and intermittent stream target population and map development was completed March 2015.
b. 22 intermittent stream sites were sampled. By the end of the first equipment deployment, 17 cameras remained due to issues with vandalism of cameras. In order to try to hit the targeted 40 sites for the 2-year study, 24 sites have been selected for FY17.

3. Increased monitoring on recreational waters.

a.	Monitoring plan development.	(FY15)	Complete
b.	Begin monitoring of highly recreated waters (both lakes and streams; 10 sites/year).	(Start FY16, con. annually)	Not initiated

Comments

a. Developed proposed list of recreational monitoring sites, which includes a total of 30 waters spread throughout the stat.

b. ADEQ's recreational monitoring was proposed internally during FY16, but was put on hold due to resource limitations and the need for increased coordination with partner agencies and landowners of recreational sites. Staff are continuing to work on program development with a proposed launch in late FY17.

Responsible Parties: Grants & Outreach Program, TMDL & Assessments Program, Ambient Monitoring Program, contracted entities as identified

Strategy ii: Develop, revise, and implement water quality standards to support water quality assessments and identification of impairments, sources, and key projects.

Milestones:

1.	Water quality standards developed or revised in accord with the Triennial Review Process. *	(FY17)	In Progress

Comments

ADEQ received an exemption from the Governor's Moratorium on Regulatory Rulemaking (Executive Order 2015-01) on August 28, 2015. The initial Notice of Proposed Rulemaking published (NPRM) in the Arizona Administrative Record (AAR) on 9/18/15 and a public hearing was held on 10/19/15. EPA R9 questioned whether the 30-day notice fulfilled the federal Triennial Review requirements. ADEQ re-noticed the NPRM on 2/19/16 and held a second public hearing on 4/6/16. The NPRM was approved by the Governor's Regulatory Review Council on 8/2/16 and the Notice of Final Rule Making published on 9/9/16. ADEQ submitted the rules package to EPA R9 for approval on 9/1/16.

The 2016 Triennial Review did not include a full review of EPA 304(a) criteria published since the 2009 ADEQ Triennial Review. Given the series of rulemaking moratoriums issued by Arizona Governor's since 2009, ADEQ had always intended that the current rulemaking would be to address past errors and make minor adjustments. The next Triennial Review is being planned for a future date and will include and full review of 304(a) criteria.

2.	Arizona's Impaired Water Identification Rule is revised to incorporate new water quality standards and better reflect EPA's impaired waters listing guidance. *	(FY17)	In Progress

Comments

ADEQ management included an update of IWIR in its priority rule updates

**Note: These milestones may be delayed due to state agency rules moratorium. See annual work plans for updates.*

Responsible Parties: Ambient Monitoring Program, TMDL & Assessments Program, Standards and Rule Development Program

Objective b: Prioritize resources toward high-priority waters for both restoration and protection activities.

Strategy i: Prioritize impaired waters for restoration activities and resources.

Milestones:

1. High priority (Targeted and/or MTL) watersheds are identified for directing resources such as 319(h) Grant resources, monitoring, education and outreach, and potential legal authorities.	(Annually)	In Progress

Comments
No changes were made to the Targeted Watersheds for FY16. The Master Target List (MTL) was updated to capture additional waters where improvement activities have taken or are expected to take place, and to separate out individual waterbody/pollutant combinations. The MTL currently stands at 107 individual waterbody/pollutant combinations.

a. Integrated Report identifies priority watersheds or waters for restoration and protection to facilitate State strategic planning for achieving water quality goals.	(FY16, FY18)	In Progress

Comments
The 2016 Integrated Report is in progress. Surface Water Section staff will coordinate to ensure that the report identifies priority restoration and protection waters/watersheds.

2. As new watersheds are identified, integrated teams including internal and external partners are created for each to identify resources and potential legal and implementation actions.	(Annually/as needed)	In Progress

Comments
ADEQ partnered with Arizona Game and Fish Department (AGFD) to fund restoration projects in area of mutual interest that have benefits to water quality and wildlife. ADEQ identified an opportunity to work with partners in the Rainbow Lake watershed to develop a plan to address nonpoint source pollutant loading. A team was established including Watershed Protection Unit staff, local ADEQ Liaison Byron James, the Town of Pinetop-Lakeside, and the Show Low Creek Watershed Enhancement Partnership. 12 local volunteers were trained to collect water quality samples to further plan development goals.

3. Internal programs develop common goals for addressing point and nonpoint source concerns in priority watersheds.

a. NPS, Stormwater, and Compliance programs identify shared goals and strategies for the Granite Creek watershed.	(FY15)	Complete*

Comments
The Watershed Protection Unit will continue to solicit and award projects in the Granite Creek watershed to reduce NPS pollution sources. Two grants were awarded in this watershed in FY 16, Prescott Creek Rodeo Grounds and Slaughterhouse Gulch Channel Restoration. Stormwater staff was and will continue to be included on technical reviews for any projects located within the MS4 boundaries to determine eligibility. Stormwater and Compliance

staff will continue to be utilized as the primary resource to address point source discharges and permit violations. **Although the milestone date for this task was listed as FY15 and it is administratively considered complete, ADEQ will continue to provide updates as appropriate on a yearly basis.*

b. NPS, Stormwater, and Compliance programs identify shared goals and strategies for the Oak Creek watershed.	(FY15)	Complete*

Comments
The Watershed Protection Unit will continue to solicit and award projects in the Oak Creek watershed to reduce NPS pollution sources. In FY16, a grant was awarded to the National Forest Foundation. The project focuses on erosion control practices on a well-traveled recreational road which is contributing to *E. coli* contamination in the watershed. The National Forest Foundation is a new grantee with ADEQ. The Foundation will work in conjunction with an established grantee, the Oak Creek Watershed Council to conduct water quality sampling. Stormwater staff was included on technical reviews for any projects located within the MS4 boundaries to determine eligibility, and will continue to be included on future reviews. Stormwater and Compliance staff will continue to be utilized as the primary resource to address point source discharges and permit violations. **Although the milestone date for this task was listed as FY15 and is it administratively considered complete, ADEQ will continue to provide updates as appropriate on a yearly basis.*

Responsible Parties: Grants & Outreach Program, TMDL & Assessments Program, Stormwater & General Permits Program, APP Program, Compliance Program, other programs as identified

Strategy ii: Develop criteria to identify and prioritize high quality or threatened waters for protection activities.

Milestones:

1.	Develop criteria for identifying high-priority protection waters.	(FY15)	Complete

Comments
Protection criteria draft documentation was reviewed internally and sent to EPA for review. A webinar discussing Protection Criteria document and mapping by ADED for EPA will be held in early FY17.

2.	Identify protection planning priorities and approaches.	(FY16)	In Progress

Comments
Approaches for identifying protection priorities were included in the draft eligibility criteria for Protection projects.

3.	Develop outreach materials to educate the public about protection-prioritized watersheds.	(FY17)	Not Applicable

Comments
No activity was planned or occurred during FY16. Outreach for Protection projects will occur in FY17.

Responsible Parties: Grants & Outreach Program, TMDL & Assessments Program, Ambient Monitoring Program, NPS grantees (e.g. University of Arizona), other programs as identified

Objective c: Identify critical pollutant sources and implementation activities needed to meet and/or maintain water quality standards in impaired and protected waters.

Strategy i: Complete in-progress traditional TMDLs to determine sources and load allocations.

Milestones:

1. Granite Creek - low D.O., *E. Coli* (includes Miller, Butte, and Manzanita Creek tribs - *E. coli*); Watson Lake (nutrients) (FY15) Complete

Comments
Granite Creek TMDL- The response to comments and TMDL summary was published to the A.A.R for public notice on September 25, 2015 and a 45-day public notice which ended November 6, 2015. TMDL documents were sent to EPA Region 9 for review on December 4, 2015. EPA approved the TMDL by the end of FY 16. Watson Lake TMDL- The response to comments and TMDL summary were published in the A.A.R. on March 6, 2015. The 45 day notice period ended on April 22, 2015. The City of Prescott formally appealed the TMDL in May 2015. Negotiation for settlement occurred on June 16, 2015. The Settlement Agreement was signed on November 6, 2015 and order vacating hearing on November 12, 2015. The TMDL and supporting documents were sent to EPA Region 9 for review on December 4, 2015. EPA approved the TMDL by the end of FY16.

2. Queen Creek - copper, lead (FY16) In Progress

Comments
Modeling team reviewed sampling data and determined that total harness data contained invalid data at the end of FY16. Recalculation of the TMDL is moving forward and is scheduled to be completed in FY17.

3. Mule Gulch - copper (FY16) In Progress

Comments
Freeport McMoRan Copper Queen branch verbally agreed to support ADEQ monitoring efforts. Equipment was installed in FY16 to restart sampling to determine current conditions and whether a TMDL will still be required.

4.	East Verde River - arsenic	(FY15)	Complete

Comments

It was determined that the arsenic exceedances in the East Verde river can be attributed to natural conditions and sampling of pooled, stagnant water in the original listing dataset. An arsenic delist report was completed in Q3 FY15.

5.	Middle Gila - selenium, boron	(FY15)	Complete

Comments

EPA approved the TMDLs for selenium and boron on the Middle Gila River on December 23, 2015.

6.	Lower Gila - selenium (potential delist), boron	(FY15)	Complete

Comments

The originally listed reach was split in 2012 based on changes in the hydrologic flow regime. The upper segment is evaluated as attaining for selenium standards, but inconclusive for boron. Further monitoring of the upper segment under representative flow conditions is recommended due to the small size of the TMDL data set in the upper segment. A delist report for both selenium and boron in the upper segment was completed in Q1 FY15.

Responsible Parties: TMDL & Assessments Program

Strategy ii: Develop comprehensive watershed plans that incorporate TMDLs and create clear paths to pollutant reduction and restoration of water quality and watershed health.

Milestones:

1. Santa Cruz River watershed plan:

a.	Initiate local stakeholder involvement.	(FY14)	Complete
b.	Complete data collection phase.	(FY15)	In Progress
c.	Complete data analysis phase.	(FY16)	In Progress
d.	Identify priority projects and complete draft plan.	(FY16)	In Progress
e.	Submit final plan to EPA for approval.	(FY17)	Not Initiated

Comments

Volunteer monitoring training was conducted in FY16 as new volunteers joined the Santa Cruz River Stormwater Assessment Group. A local lab was set up to provide a central location for sample storage and analysis in FY15. Received supplies and equipment to further expand volunteer monitoring in FY16. There was not enough precipitation for volunteers to take samples by the end of FY16. While currently off track, active participation of landowners and managers, sampling equipment, and laboratory are in place to quickly accomplish data collection and analysis milestones. The background and methods section of the watershed plan was drafted in FY15. Project identification will start at the beginning of FY17 due to the lack of samples collected. The final Clean Water Plan is still on track to be completed by the end of FY17.

2. Identify watershed(s) for future plan development. (FY16) In Progress

Comments
ADEQ is updating and expanding the San Pedro WIP to include additional impaired/contributing reaches, and will perform reach-specific TMDL analysis to better inform implementation decisions in the reaches of the San Pedro River from the Mexico border north to Dragoon Wash. In addition, the Rainbow Lake watershed was identified for future plan development in FY16. Sampling equipment was purchased to support volunteers in the watershed and watersheds to be identified in FY17. Gila Watershed Partnership also expressed interest in expanding the WIP to include additional areas of the watershed. More consideration will be given to new watersheds in FY17.

Responsible Parties: Grants & Outreach Program, TMDL & Assessments Program, OBEP, NPS grantees (e.g. University of Arizona)

Strategy iii: Update existing WIPs; create framework for future updates.

Milestones:

1. Update existing WIPs to include analysis of how individual projects relate to the overall load reductions necessary for standards attainment and indicate projects that have been completed (Granite, Oak, San Fran/Blue, San Pedro). (1/year) In Progress

Comments
ADEQ updated the Granite Creek WIP and sent to WIC for review. Comments due Q1 FY17. Final will be completed by Q2 FY17. Preliminary planning and sampling was initiated for the San Pedro plan update. Staff traveled to Rainbow Lake and trained 18 community volunteers in water quality sampling. Sampling equipment was loaned to the group for sample collection at sampling sites identified by ADEQ during the training event. No samples were collected because of lack of rainfall. While the completion of one plan each year may not be realistic when plan updates require additional data collection, ADEQ will continue to work on completing existing and new plans in shorter timelines without sacrificing local involvement and buy-in.

2. Develop and implement a schedule and process for reviewing and updating watershed plans. (FY15) Not Initiated

Comments

The San Pedro WIP update and expansion was scheduled for FY16. However, a formal schedule has not yet been developed for ongoing plan updates. In FY17, the Watershed Protection Unit will begin to develop a formal standardized process for reviewing and updating watershed plans.

Responsible Parties: Grants & Outreach Program, TMDL & Assessments Program, NPS grantees (e.g. University of Arizona)

Strategy iv: Pursue alternative restoration approaches for situations when a full "9 Key Element" plan may not be necessary to address a pollutant source.

Milestones:

1. Complete focused TMDLs/data summaries for work plan-identified watersheds where alternative funding sources are available to address sources of pollution.

a. Big Bug	(FY15)	Complete
b. Additional projects as identified in annual work plans.	(ongoing)	In Progress

Comments

a.) Big Bug Data Summary was completed in January 2016 and shared with USFS. USFS completed remedial activities of three mines in the watershed in FY16. Effectiveness monitoring needs to be scheduled.

2. Submit list of watersheds to EPA where alternative planning documents (for protection projects and other situations as outlined in the EPA Guidelines) may be used to justify use of NPS funding for project implementation.	(FY17)	In Progress
a. Develop alternative planning documents for work plan-identified watersheds.	(See Work Plan)	Not Applicable
b. Implement alternative plans as prioritized by annual work plans.	(See Work Plan)	Not Applicable

Comments

ADEQ developed criteria for funding Protection projects and submitted to EPA in FY16. Planning based on defined Protection Criteria will occur in FY17 with funding occurring in FY17 or FY18.

Responsible Parties: Grants & Outreach Program, TMDL & Assessments Program, NPS grantees (e.g. University of Arizona)

GOAL #2: IMPLEMENT PROJECTS TO PREVENT AND REDUCE NPS POLLUTANT CONTRIBUTIONS TO HIGH PRIORITY IMPAIRED AND PROTECTED WATERS.

Objective a: Implement projects to address impairments in Targeted Watersheds.

Strategy i: Implement **Granite Creek** WIP

Milestones:

1.	Complete implementation of Whipple Street Detention Basin and Prescott Community Center projects.	(FY15)	Complete

Comments

Project closed on June 30, 2015. Tasks carried out during this project include public involvement and planning through WIC meetings, general public meetings, and boots-on-the ground BMP installation at two large rain gardens and a retention basin as part of a green infrastructure plan to keep E. coli from reaching Granite Creek. Water quality monitoring is ongoing at select sites in the Granite Creek watershed above and below the rain gardens and retention basin by ADEQ and Prescott Creeks Association staff.

2.	Identify projects to pursue funding.	(Annually)	In Progress

Comments

The need for additional manure management, green infrastructure, and urban agriculture BMPs in the Miller Creek sub watershed was identified as part of the WIP update. City of Prescott's Rodeo Grounds project, identified as a high priority in the initial Granite Creek WIP, was completed June 30, 2016. As part of the Rodeo Grounds project, brochures where available for distributed to participants and spectators of the "World's Oldest Rodeo" events at the end of FY 16 and into FY 17. The brochures described the availability of a Manure Share website developed by the Oak Creek Watershed Council, another WQIG grantee. Received 2 Cycle 18 WQIG applications for Granite Creek watershed. Continue to stay engaged with WIC, Prescott Creeks, Prescott College, etc.

3.	Implement at least one project per grant cycle as funding and competitive project scoring allows.	(See NPS Annual Report)	In Progress

Comments

Prescott Rodeo Grounds project was completed in FY16. Slaughterhouse Gulch erosion control project awarded to Prescott Creeks on Prescott Yavapai Tribal Land in Cycle 18. The project is located on the eastern portion of the Upper Granite Watershed located on the Yavapai-Prescott Indian Tribe land.

4.	Reduce nutrient loads to Watson Lake by 5% (baseline = TMDL).	(FY19)	In Progress

Comments

Projects continue to be identified and awarded in the Granite Creek watershed. Effectiveness monitoring began by ADEQ and volunteers (Prescott Creeks, Prescott College, and others) in the Granite Creek watershed in September 2016 to aid in the determination of whether we are on track to

meet this load reduction goal. Effectiveness monitoring of Whipple Street basin, Prescott Adult Center, Watson-Woods Riparian Corridor, and Prescott Rodeo Grounds. 4 sampling events had been collected in FY16. More sampling is required to quantify improvements and is ongoing.

5.	Set percent reduction goals for *E. coli* loads to Granite Creek.	(FY15)	In Progress

Comments
The Granite Creek TMDL was approved by EPA in Q4 2016. Load reductions will be calculated based on approved TMDL.

Responsible Parties: Grants & Outreach Program, TMDL & Assessments Program, NPS grantees, other programs as identified

Strategy ii: Implement **Oak Creek** WIP

Milestones:

1.	Complete Implementation of Midgely Bridge project.	(FY15)	Complete

Comments
Implementation and final review of the Midgely Bridge project was completed in July 2014.

2.	Complete Implementation of Oak Creek Ambassadors project.	(FY16)	In Progress

Comments
The current Oak Creek Ambassadors grant was extended and will expire on August 31, 2016 to allow time to complete match. Water quality samples were collected throughout the contract period and were QA/QC'ed by U of A staff. The Ambassadors will be working with the USFS in Fossil Creek during FY17.

3.	Identify projects to pursue funding.	(Annually)	In Progress

Comments
Cycle 18 had 3 applications in Oak Creek watershed. Due to a highly competitive grant cycle, only the Schnebly Hill erosion control project was awarded to the National Forest Fund. The project will reduce sediment and E. coli from the highly recreated Schnebly Hill Rd. ADEQ presented Oak Creek Watershed Council with improvements to their grants for Cycle 19 and expect to see improved project applications.

4.	Implement at least one project per grant cycle as funding and competitive project scoring allows.	(See NPS Annual Report)	In Progress

Comments

WQIGs were awarded in the Oak Creek watershed in both Cycle 15 (Settler's Rest) and Cycle 16 (Oak Creek Ambassadors). The Settlers Rest project was completed January 31 2016. Oak Creek Ambassadors project will be competed on August 31, 2016. Cycle 18 awarded an erosion control project to the National Forest Fund on Schnebly Hill Rd.

5.	*E. coli* loads to Oak Creek are reduced by 15% (baseline = TMDL).	(FY19)	In Progress

Comments
ADEQ is actively supporting implementation projects to reduce bacteria loading in the watershed. Oak Creek has been identified as an effectiveness monitoring focus watershed for FY17, at which point the overall impact of projects to date on bacteria loading will be assessed and documented.

Responsible Parties: Grants & Outreach Program, TMDL & Assessments Program, NPS grantees, other programs as identified

Strategy iii: Implement **San Pedro** WIP

Milestones

1.	Begin implementation of San Pedro WIP projects.	(FY15)	Complete

Comments
WIP project implementation was initiated in the San Pedro in FY15. Future projects funded in this watershed during the current 5-year planning cycle will be reported under Milestone #3 of this strategy.

2.	Identify projects to pursue funding.	(Annually)	In Progress

Comments
Cycle 18 had 5 WQIG applications in the San Pedro watershed. The increase in applications is due to more ADEQ involvement in the watershed, and expanding the eligible area.

3.	Implement at least one project per grant cycle as funding and competitive project scoring allows.	(See NPS Annual Report)	In Progress

Comments
ADEQ awarded 4 grants in the San Pedro watershed in Cycle 18. 2 projects were awarded to Borderlands Restoration to do low impact erosion control structures in subwatersheds. One project was to a private landowner for fencing, an off water drinker, and grassland restoration. The final project was awarded to the Hereford NRCD to construct a water retention structure and grazing management. All four were awarded to new grantees.

4.	Set reduction goals for *E. coli* loads to the San Pedro River.	(FY15)	In Progress

Comments
ADEQ has determined that more reach-specific TMDL values should be calculated to better quantify the load reduction needs from the various tributary and main stem reaches in the upper watershed. The San Pedro WIP update, which began in FY16 and continues into FY17, will include TMDL calculations.

Responsible Parties: Grants & Outreach Program, TMDL & Assessments Program, NRCS, NPS grantees, other programs as identified

Strategy iv: Implement **San Francisco/Blue River** WIP

Milestones:

1.	Complete implementation of Clifton Restroom project.	(FY15)	Complete

Comments
The Clifton Restroom project was completed on 12/31/15

2.	Complete implementation of San Francisco River Restroom ~~and Menges Ranch projects.~~	(FY16)	Complete

Comments
The San Francisco River Restroom project was completed on 12/31/15. The Menges Ranch project was discontinued at the request of the grantee prior to implementation.

3.	Identify projects to pursue funding.	(Annually)	In Progress

Comments
Gila Watershed Partnership submitted a WQIG application for Cycle 18. The Menges Ranch also expressed interest in reapplying for prior grant in an upcoming grant cycle.

4.	Implement at least one project per grant cycle as funding and competitive project scoring allows.	(See NPS Annual Report)	In Progress

Comments
A Cycle 18 grant was awarded to the Gila Watershed Partnership group to construct low-impact erosion control structures in the uplands of subwatersheds to the San Francisco River.

5.	*E. coli* loads to the San Francisco/Blue are reduced by 10% (baseline = 2010 IR data).	(FY19)	In Progress

Comments
ADEQ staff conducted pre-implementation monitoring for two restroom projects in the San Francisco/Blue watershed during FY15. Post-implementation data was collected in FY16 to determine progress toward meeting the 10% reduction goal. This data along will need to be supplemented with samples collected in FY 17.

Responsible Parties: Grants & Outreach Program, TMDL & Assessments Program, NPS grantees, other programs as identified

Strategy v: Implement projects in the **Little Colorado River** Headwaters Watershed

Milestones:

1.	Using existing Upper Little Colorado River watershed plan, Natural Channel Design planning document and ADEQ project evaluations as prioritization tools, implement at least one project per grant cycle as funding and competitive project scoring allows.	(See NPS Annual Report)	In Progress

Comments
Cycle 17 was a targeted cycle for the LCR watershed due to the large response of projects for the Cycle 15 grant. Apache NRCD submitted 4 projects that were not awarded in Cycle 15. All 4 projects were awarded. NPS staff also coordinated with Compliance staff to recommend a high-impact Supplemental Environmental Project (SEP) to mitigate an APP permit violation that occurred in the LCR Headwaters watershed. As a result, a road crossing at the base of Coyote Creek that was a significant source of sediment to the LCR was repaired during FY15. NPS staff will work with Compliance and the involved parties to calculate resulting load reductions during FY17. ADEQ NPS staff visited the road crossing and communicated results with Compliance staff.

2.	Sediment loading into LCR from the Coyote Creek sub watershed is reduced by 21% (baseline = 2010 IR data).	(FY19)	In Progress

Comments
Effectiveness monitoring for the LCR Headwaters watershed began in spring 2015, and implementation activities are ongoing. Pre-implementation load reduction estimates for Cycle 15 projects in the LCR watershed indicate the potential to reduce as much as 20% of the annual sediment loading from Coyote Creek.

Responsible Parties: Grants & Outreach Program, TMDL & Assessments Program, NRCS, NPS grantees, other programs as identified

Strategy vi: Implement **Santa Cruz River** WIP

Milestones:

1.	Release funding opportunity upon completion of watershed plan.	(FY18)	Not Applicable

Comments

The development of the Santa Cruz River Clean Water plan is underway. ADEQ is on track to release a funding opportunity for this watershed in FY18.

2.	Implement at least one project in support of the Santa Cruz watershed plan.*	(FY19)	Not Applicable

Comments

The development of the Santa Cruz River Clean Water plan is underway. ADEQ is on track to begin implementing plan-supported projects in this watershed by FY19.

**Note: Implementation in this watershed may begin prior to plan completion as "straight to implementation" projects are identified.*

Responsible Parties: Grants & Outreach Program, TMDL & Assessments Program, OBEP, NPS grantees, other programs as identified

Strategy vii: Implement portions of the Boulder Creek TMDL Implementation Plan pertaining to the lower tailings pile at the former Hillside Mine site.

Milestones

1.	MOU between ADEQ, ASLD, and ADOA/State Risk detailing long-term commitments to the Hillside project is finalized.	(FY15)	Complete

Comments

ISA was completed at the beginning of FY15.

2.	Implementation planning for project is completed and agreed upon by all involved parties.	(FY15)	In Progress

Comments

Road corridor was finalized and cultural/biological resource surveys were completed. Construction plans developed and engineering review initiated. Extension of grant from EPA. Project must be completed by June 30, 2017.

3.	Project implementation complete.	(FY16)	In Progress

Comments
Current project scheduling anticipates implementation, and funding requires, to be completed in FY17.

4. Total zinc loads to Boulder Creek are reduced by 25%. (FY18) In Progress

Comments
Monitoring is ongoing by ADEQ. BLM has contracted NAU to complete effectiveness monitoring on the upper pile, ADEQ is working closely to ensure quality data.

Responsible Parties: Grants & Outreach Program, TMDL & Assessments Program, ASLD, ADOA/State Risk, other partners as identified

Strategy viii: Implement projects in the Tonto/Christopher Creek watershed

Milestones

1. Implement at least one project per grant cycle as funding and competitive project scoring allows. (See NPS Annual Report) Not Initiated

Comments
Tonto Creek was not identified as a targeted watershed for FY16 funding cycles due to the lack of a developed implementation plan.

2. Document progress toward achieving required NPS load reductions to meet water quality standards. (FY15) In Progress

Comments
A delist report for Tonto Creek/nitrogen was finalized in FY16 and was included in the 2016 assessment.

Responsible Parties: Grants & Outreach Program, TMDL & Assessments Program, USFS, NPS Grantees, other partners as identified

Objective b: Ensure that WQIG funding is invested in the projects that are most likely to provide long-term load reductions to achieve watershed-wide improvements.

Strategy i: Require that implementation grant proposals demonstrate:

- Connection to an approved watershed-based plan
- The estimated pollutant load reductions and how they relate to the reductions needed to meet water quality standards (if established in an approved plan)
- That the applicant has sufficient resources, technical skills, and commitments to implement the project and provide for long-term maintenance
- How education and outreach components will encourage water quality improvements, behavior changes, and citizen involvement

- How project success will be measured in both the short and long term

Milestones

1.	Revise grant materials to account for NPS guideline changes.	(FY15; as needed)	Complete/ In Progress

Comments

Revised scoring tool to better align with application to make scoring more streamlined.

2.	Conduct training on monitoring plan development.	(FY15, 16)	In Progress

Comments

Developed Abbreviated Monitoring Plan (AMP) template for grantees and collaborated with individual grantees to complete AMPs for all current and newly awarded projects. Staff are coordinating and working proactively with grantees on the development of these AMPs.

3.	Provide technical assistance to applicants for the development and implementation of projects.	(Annually)	In Progress

Comments

Staff provided ongoing technical assistance for current and potential WQIG projects in the form of BMP selection and design recommendations, training on visual and quantitative monitoring, budget and report assistance, and addressing general technical questions as they arose.

4.	Plan, market, and oversee WQIG funding opportunities.	(Annually)	In Progress

Comments

WQIG cycles 17 and 18 were completed during FY16.

Responsible Parties: Grants & Outreach Unit, NPS grantees (e.g. University of Arizona), TMDL & Assessments Program

Strategy ii: Oversee WQIG projects and contracts to ensure that deliverables and timelines are met, and that anticipated outcomes are achieved.

Milestones

1.	Review projects at least quarterly to ensure that timelines and deliverables are on track. Work with grantees and subgrantees as necessary to resolve issues as they arise and schedule site visits.	(Annually)	In Progress

Comments

Project management staff worked on a total of 27 WQIG projects during FY16. Projects success was reviewed at least quarterly for all projects. Site visits were conducted for all on-the-ground projects. Projects initially awarded during FY16 are listed in Appendix B.

2. Review, approve, and process reimbursement requests. (Annually) In Progress

Comments
Staff reviewed reports and reimbursement requests for 15 projects over the course of FY16, totaling $2,756,957.95 in WQIG funds.

3. Conduct project close-out site visits to ensure that all work was completed and long-term management plans are in place. (Annually) In Progress

Comments
All on-the-ground WQIG projects that closed in FY16 received close-out site visits to confirm satisfactory project completion.

Responsible Parties: Grants & Outreach Unit

Objective c: Implement projects to protect healthy surface and groundwater resources

Strategy i: Utilize prioritization scheme identified in Strategy 1.b.ii to rank waters for protection projects and implement protection projects.

Milestones:

1. Release funding opportunity for protection projects. (FY17) In Progress

Comments
ADEQ began drafting protection funding criteria in FY15. A final draft was shared with EPA for comment and feedback in Q4 2016. A protection funding opportunity will be made available pending EPA approval.

2. Receive and award applications for protection projects. (FY17) Not Applicable

Comments
No activity on this task was planned or completed for FY16.

3. No water bodies or reaches in protection-prioritized waters are moved to the 303(d) list for the 2018 assessment. (FY18) Not Applicable

Comments
No activity on this task was planned or completed for FY16.

Responsible Parties: Grants & Outreach Program, other programs as identified for technical support purposes

GOAL #3: COORDINATE EFFORTS OF VARIOUS PROGRAMS WITHIN ADEQ WITH OTHER AGENCIES AND PARTNERS TO PREVENT AND REDUCE NPS POLLUTION IMPACTS TO SURFACE AND GROUNDWATER.

Objective a: Utilize legal authorities to reduce NPS contributions to surface and groundwater.

Strategy i: Coordinate with internal Groundwater, Compliance, Source Water Protection and 401 programs and with delegated county authorities to ensure that permit reviews and inspections take potential nonpoint source contributions to surface water impairments into account, and to identify potential nonpoint source threats to drinking water sources.

Milestones:

1. Update Groundwater, Compliance, Source Water Protection, and 401 Certification programs and delegated authorities on changes to NPS targeted watersheds.	(Annually/as needed)	In Progress

Comments
There were no changes to the NPS targeted watersheds during FY16. However, the Groundwater/Permits, Compliance, Source Water Protection and 401 cert programs stayed coordinated with the overall NPS program in the following ways:

- Groundwater/Permits:
  - Active participation in the Middle Gila TMDL process, including permit limit calculations, stakeholder outreach, and document reviews.
  - Active participation in Granite Creek and Watson Lake TMDLs
  - Technical review of WQIG applications
- Compliance:
  - Tracking progress of Supplementary Environmental Projects (SEP) in the LCR targeted watershed (Coyote Creek)
  - Working with private middle pile owner at the Hillside Mine site in the Boulder Creek targeted watershed.
  - WPU staff responded to complaint of possible sewage flowing in small unnamed tributary. Collected samples, shared results with Compliance, Permitting, and external entities.
- Source Water:
  - Joint participation with the Watershed Protection Unit in ACWA/Groundwater Protection Council webinar series
  - Participation in Protection Criteria development

2. Evaluate potential for agricultural use pesticide active ingredients to reach/impact groundwater. (Annually) In Progress

Comments

Reviewed and approved 30 active ingredients, 11 of which were biopesticides or geopesticide waivers. Of the 30 approved active ingredients, three of the active ingredients were placed on the draft 2016 Groundwater Protection List (GWPL) and one additional active ingredient will be placed on the draft 2017 GWPL, since it was approved in the first quarter 2016.

Presented an update on the state of the program to the Western Plant Health Association (WPHA) on April 28, 2016.

3. Publish the annual Groundwater Protection List (GWPL). (Annually) In Progress

Comments

The draft 2016 Groundwater Protection List was published in the Arizona Administrative Register on May 20, 2016 for public comment. No comments were received.

2. Conduct inspections of biosolids facilities to ensure that disposal and/or surface applications are not impacting surface/groundwater quality. (Annually) In Progress

Comments

12 biosolids facilities were inspected in FY16:

- Wastewater treatment plants that land apply or surface dispose biosolids: 5
- Large commercial applicators: 5
- Small commercial applicators: 2

Responsible Parties: APP Program, Groundwater Program, Source Water Protection Program, 401 Certification Program, Community Liaisons/other agency outreach staff

Strategy ii: Coordinate with state and federal partners to ensure that grazing permits and resource management plans, specifically in targeted watersheds, appropriately consider water quality concerns.

Milestones:

1. ADEQ is included in the development and review of Coordinated Resource Management Plans in priority watersheds. (FY16) In Progress

Comments

ADEQ participated in CRM meetings during FY16 but did not make measurable progress toward this goal. ADEQ will continue to be involved in CRM meetings and participate in the review of CRM plans.

Responsible Parties: Grants & Outreach Program, CRM Partners (including NRCS and ASLD), TMDL & Assessments Program

Objective b: Encourage public involvement in locally-driven efforts to improve and protect water quality.

Strategy i: Provide technical assistance, education, and training to empower watershed partners to develop and implement projects supported by watershed plans

Milestones:

1. Provide education and training opportunities on water quality topics of concern to watershed partners. (As requested) In Progress

Comments
Staff participated heavily with stakeholders in the Rainbow Lake, Granite Creek, Oak Creek, San Pedro, and Santa Cruz watersheds in FY16. A total of 16 (11 SCR, 3 GC, 2 GWP, 18 in Rainbow Lake) volunteers were trained by ADEQ across the state to collect data in support of watershed planning projects. Staff also participated in outreach events and delivered presentations for the Arizona Riparian Council, NAU, Coconino Plateau Water Advisory Council, Resource Conservation Districts (Hereford and San Pedro RCDs), and multiple landowners and managers in the San Pedro and Little Colorado River targeted watersheds. Ron Tiller provided training to BLM on vegetation monitoring techniques. U of A staff trained a total of 474 people across Arizona in FY 16 and continue to train volunteers in the targeted watersheds while reaching out to new their presence in targeted watersheds while reaching out to watersheds with newly forming engaged citizen groups.

2. Conduct workshops in watersheds with completed watershed plans to encourage the implementation of high-priority projects. (Annually) In Progress

Comments
Grant workshops were held in Springerville (Little Colorado River Watershed), Clifton (San Francisco watershed), with greater emphasis on web-based workshops. Web-based workshops increased overall attendance and reach with all of the targeted watersheds being represented.

3. WQIG FAQ, alternative/match funding resources, and interactive map with links to project information are added to website to make program information readily accessible to the public. (FY15) In Progress

Comment
ADEQ's Communications office is currently planning and implementing major changes to the overall format and content of the agency website. An FAQ has been drafted and will be shared on the new version of the website in FY17.

Responsible Parties: Grants & Outreach Program, TMDL & Assessments Program, NPS grantees (e.g. University of Arizona), Community Liaisons/other agency outreach staff, Communications Office, Data Management Program

Strategy ii: Develop outreach strategies that identify direct benefits of project implementation beyond water quality improvements to stakeholders.

Milestones:

1. Coordinate with NRCS to produce outreach materials that highlight soil conservation, range health, and other potential secondary benefits of WQIG project implementation. (FY15, 16) In Progress

Comment
Staff held preliminary discussions with NRCS range conservationists and Agricultural Research Service hydrologists to develop outreach materials regarding specific, commonly used BMPs in the upper San Pedro River basin (low tech erosion control structures and brush treatments).

2. Applications for WQIG funding are received from all eligible targeted watersheds. (Annually) In Progress

Comment
Applications were received from all targeted watersheds in FY16. Cycle 17 targeted the Coyote Creek watershed and Cycle 18 received applications from Oak Creek, Granite Creek, San Pedro River, and San Francisco River watersheds.

3. Applications for project leveraging Farm Bill funding to improve water quality are received from all NWQI watersheds. (Annually) In Progress

Comment
WQIG applications were received from the Coyote Creek and Road Tank NWQI watersheds during FY16. No applications were received from Greenbrush Draw or Spring Creek, although some projects in the San Pedro watershed fall right on the border of some of the NWQI watersheds and are even given to the same landowner. ADEQ will work with local NRCS and NRCD staff to identify eligible projects in these areas.

Responsible Parties: Grants & Outreach Program, NRCS

Strategy iii: Train volunteer monitoring groups to collect credible data that can be used in ADEQ water quality assessments.

Milestones:

1. Partner with U of A to implement a startup volunteer monitoring support program. (FY15, 16) In Progress

Comment
ADEQ and U of A worked together to establish training protocols and field forms which were put to use in the Santa Cruz, Oak Creek, Rainbow Lake, San Francisco/Blue, and Granite Creek watersheds. Equipment to loan to volunteer programs was purchased in FY16.

2. Develop training protocols that can be used throughout the state for volunteer monitoring groups. (FY15) In Progress

Comment
U of A and ADEQ staff worked together to create field forms that can be easily adapted for volunteer groups around the state. Updated volunteer registration forms were obtained from ADOA and all volunteers are required to fill them out and submit them to ADEQ prior to participating in sampling activities. ADEQ will continue to add to and update volunteer training materials as the program develops, and seeks to create more clearly defined standard work for new volunteer groups during FY17. ADEQ funded UA to purchase equipment to loan out to volunteer monitoring groups.

3. Hire internal staff to support and oversee volunteer monitoring. * (FY 17) Not Applicable

Comment
Hiring of a Volunteer Monitoring Coordinator remains a FY17 goal at this time. In the meantime, internal staff are working with U of A to train volunteers in targeted watersheds.

4. Targeted Watersheds have at least one active volunteer monitoring entity, where feasible. † (FY 17) In Progress

Comment
There are active volunteer monitoring activities occurring in the Santa Cruz, San Pedro, Oak Creek, Granite Creek, and San Francisco/Blue River targeted watersheds, as well as in the Rainbow Lake watershed. Volunteers in the San Pedro were will be trained during FY16 as part of the development of the San Pedro Clean Water Plan.

5. Credible external data from priority watersheds is incorporated into the surface water quality database for use in future assessment reports. (Annually) In Progress

Comment
Data was collected by stakeholders in the Granite Creek, Oak Creek, and San Pedro River watersheds during FY16 for inclusion in ADEQ's water quality database.

**Note: Completion of this milestone is dependent on the availability of funding in future fiscal years.*

†Note: Factors that impact the practicality of volunteer monitoring may include type of monitoring required to track improvements and the proximity of local stakeholders to the project/monitoring sites.

Responsible Parties: Grants & Outreach Program, TMDL & Assessments Program, NPS grantees (e.g. University of Arizona), Community Liaisons/other agency outreach staff

Objective c: Encourage and work with land and resource management agencies, tribal authorities, bordering states and Mexico to identify and mitigate nonpoint source pollution impacts in Arizona.

Strategy i: Continue to strengthen relationships with other agencies, tribes, bordering states, and Mexico to encourage development of effective water quality improvement projects and avoid project practices that would contribute to impairment of surface or groundwater quality or degradation of protected watersheds.

Milestones:

1. Work with NRCS to develop and implement monitoring strategies for existing and new NWQI projects. (Annually) — In Progress

Comments
Watershed Protection Unit staff worked with local and state-level NRCS staff to secure information about NWQI project activities and locations for a total of 5 NWQI projects during FY16. BMP evaluations were completed on two of these projects, one project awaits environmental clearance before proceeding. Post-construction monitoring is planned for the others. Effectiveness monitoring of these NWQI projects was included in the development of sampling plans for both the Upper LCR and San Pedro watersheds.

2. Memoranda of Understanding with agencies and tribes updated to better support this 5-year strategic plan. This list reflects planned MOU activities as of July 2014 and may be updated in the future.

a. Update USFS MOU to reflect new NPS program strategies and leverage partnership opportunities. (FY15) — Complete

Comments
The USFS MOU update was finalized in October 2014. Existing goals outlined in the MOU were determined broad enough to cover NPS planning goals, and both parties agreed that specific annual goals were better suited to being determined at the annual MOU meetings.

b. Develop MOU with AZG&F to facilitate increased fish tissue and recreation area monitoring. (FY16) — Complete

Comments
ADEQ and AZG&F staff met to discuss how to best coordinate monitoring activities in 2015. Both agencies determined that in lieu of a formal MOU, a coordination meeting would be held annually with informal contact throughout the year.

c. Coordinate with ASLD to develop an MOU that facilitates the use of NPS funds to implement projects on State Lands. (FY19) — Not Applicable

Comments
No activity on this task was planned or completed for FY16.

3. ADEQ participation in coordinate resource planning efforts of federal and state agencies (e.g. planning, federal action reviews).	(Annually)	In Progress

Comments
The Water Quality Division participated in 47 environmental reviews during FY15.

4. Participation in meetings with binational stakeholders regarding issues and remedies to water quality impairments in shared watersheds across the US/Mexico border including the targeted Santa Cruz and San Pedro watersheds.	(Annually)	In Progress

Comments
Staff continued working on border issues in the Santa Cruz and San Pedro watersheds. Specific activities are described in detail in the FY16 4th Quarter Output Report, submitted to EPA on 9/9/16, under Task 5.5.5 (pg. 123)

Responsible Parties: Grants & Outreach Program, TMDL & Assessments Program, OBEP, NRCS, USFS, AZG&F, ASLD, WQD Director's Office, APP Program, Community Liaisons/other agency outreach staff, Administrative Counsel

GOAL #4: EVALUATE AND IMPROVE THE EFFECTIVENESS OF THE NPS PROGRAM AND COMMUNICATE SUCCESSES.

Objective a: Evaluate WQIGs and TMDL implementation activities to determine effectiveness toward achieving water quality standards.

Strategy i: Conduct effectiveness monitoring and BMP evaluations in watersheds prioritized on ADEQ's Master Target List (MTL), including NWQI waters.

Milestones:

1. MTL monitoring and evaluation priorities identified for each fiscal year.	(See Work Plan)	In Progress

Comments
In FY16 33 MTL waters were monitored and 25 showed improvement; 74% of monitored waters showed improvement. The improved waters included 18 water pollutant combinations being delisted from the 303(d)-List. Portions of Mulch Gulch and the Gila, Salt, Hassayampa, East Verde and Colorado Rivers were delisted. Additional improvements were measured in Boulder and Turkey Creeks.

2. Site visits, evaluations, monitoring and/or modeling conducted for projects in work plan identified MTL waters.	(Annually)	In Progress

Comments

Samples were collected from 10 targeted MTL waters including watershed group efforts in the Granite Creek and upper Santa Cruz watersheds. Project site visits and/or BMP evaluations were conducted in all targeted watersheds except for Turkey, Tonto, and Christopher creeks, where there are no active projects.

3. 10% of MTL waters monitored on an annual basis show improvements to water quality (50% of all monitored waters over 5-year time frame).	(Annually)	In Progress

Comments
The strategic planning period that the performance measure covers extends from state FY14 through FY18. Through FY16 59% (24 out of 41) of the monitored MTL waters have shown an improvement over baseline WQI calculations

4. Coordinate with NRCS to develop a monitoring plan for ADEQ assistance in NWQI watersheds.	(FY15)	Complete

Comments
Sampling and analysis plans have been completed for the LCR Headwaters and San Pedro River watersheds. These include monitoring both CWQ 319 and NWQI funded projects. These plans may be updated in the future as additional projects from both funding sources are awarded.

5. Coordinate with NRCS to conduct effectiveness monitoring in the Coyote Creek watershed and other NWQI watersheds as identified in state FY work plans.	(Annually)	In Progress

Comments
Watershed Protection Unit staff met with local NRCS staff and contractors in the San Pedro and LCR watersheds throughout FY16 to collaborate on Cycle 15 and Cycle 17 projects involving multiple locations and landowners. The partnering of NPS and NWQI projects has been profitable for the environment since the partnerships allow funding to be stretched over more project or cover more areas for on-the-ground restoration work.

Responsible Parties: Grants & Outreach Program, TMDL & Assessments Program, other programs/monitoring staff as identified

Strategy ii: Increase staff capacity to recommend, design, and evaluate the effectiveness of BMPs.

Milestones:

1. Provide BMP training to staff.	(Annually)	In Progress

Comments
Staff participated in the following trainings in FY16 to improve capacity to recommend, design, and evaluate the effectiveness of BMPs:

- WASP Modeling training Atlanta (July 2015)

- AGWA training through U of A (October 2015)
- ARS Brush Management Workshop (November 2015)
- Arduino FONA Training (April 2016)

2.	Hire staff with expertise in BMP design and evaluation.	(FY15)	Complete

Comments
The Watershed Protection Unit hired a BMP Effectiveness Coordinator, Ron Tiller, in October of 2014.

3.	Develop updated BMP guidance for WQIG applicants based on effectiveness monitoring.	(FY19)	In progress

Comments
Staff established monitoring protocols for brush treatment and sediment basin BMP evaluations, collected baseline and post-treatment data. Subsequent years data will be used to develop BMP guidance since effects on recent treatments are only now starting to manifest themselves. In the interim, staff are working with retired NRCS staffer to develop guidance for evaluating site potential for brush treatment BMPs.

Responsible Parties: Grants & Outreach Program, TMDL & Assessments Program, NPS grantees, other contractors as identified

Objective b: Document and communicate program successes and lessons learned.

Strategy i: Report to EPA and the public on NPS program success

Milestones:

1.	Report annually on NPS 5-year Plan progress.	(Annually)	In Progress

Comments
The FY15 Nonpoint Source Annual Report was submitted to EPA in November 2015.

2.	Report on state fiscal year work plan progress.	(Semi-annually)	In Progress

Comments
The FY14 Final Output Report was submitted to EPA in August 2014. The FY15 Midyear Workplan Report was submitted in February 2015. The FY15 4th Quarter Final Output Report has been submitted to EPA as of the writing of this document (August 2015) and is a deliverable of the FY16 workplan.

3. Develop success stories to document de-listings (WQ-10) as well as documentation of interim progress toward restoration (SP-12) in accordance with EPA requirements. (Minimum 2 stories and/or documentations of progress per year). In addition, progress summaries for non WQ-10 or SP-12 watersheds may be identified on an annual basis.	(See Work Plan)	In Progress

Comments
EPA reviewed documentation for Mule Gulch and the Middle Gilas. Success storied will be completed in FY17. The revised Pinto SP-12 was submitted to EPA in FY16. EPA completed a storybuilder but are awaiting more data points and will be completed in FY17. ADEQ submitted documentation for Tonto and Boulder Creek. Tonto success story will be developed once delist is approved (FY17) and Boulder Creek is waiting for Hillside to finalize - success story planned for FY18.

4. Report to EPA on effectiveness of NWQI implementation activities.	(Annually/as requ. by EPA)	Not applicable

Comments
No NWQI effectiveness reporting was due during FY16.

5. Report mandated elements for all projects in GRTS, including load reduction estimates as applicable.	(Annually)	In Progress

Comments
GRTS load allocations and mandated elements were updated prior to the February 2015 deadline.

Responsible Parties: Grants & Outreach Unit Program, TMDL & Assessments Program, NRCS, other programs as identified

Objective c: Update NPS Plan as needed

Strategy i: Update plan as needed to reflect shifting priorities as they occur over the current planning horizon and to re-frame goals for the next 5-year planning horizon.

Milestones:

1. NPS Plan is evaluated for update needs.	(Annually)	In Progress

Comments
No major updates to the plan occurred during FY16.

2.	Updates, if required, are submitted to EPA and a review and approval schedule is established.	(As needed)	Not applicable

Comments
No major updates to the plan occurred during FY16.

3.	Initial FY20-25 5-year NPS Plan draft plan submitted to EPA.	(FY18)	Not applicable

Comments
No activity was planned or occurred during FY16.

4.	FY20-25 5-year NPS Plan approved by EPA.	(FY19)	Not applicable

Comments
No activity was planned or occurred during FY16.

Responsible Parties: Grants & Outreach Program, other programs as identified, EPA Region 9

Appendix A: Master Target List

The Master Target List consists of 108 waterbody/pollutant combinations. Listings marked with ~~strikethrough text~~ have been delisted as of 12/1/16.

	Name	Impairment	Description
1	~~Colorado River~~	~~Selenium~~	~~Lake Powell- Paria River~~
2	Boulder Creek	Arsenic	Wilder Creek - Butte Creek
3	Boulder Creek	Copper	Wilder Creek - Butte Creek
4	Boulder Creek	Zinc	Wilder Creek - Butte Creek
5	Boulder Creek	Beryllium	Wilder Creek - Butte Creek
6	Boulder Creek	Manganese	Wilder Creek - Butte Creek
7	Boulder Creek	low pH	Wilder Creek - Butte Creek
8	Boulder Creek	Arsenic	Butte Creek- Copper Creek
9	Coyote Creek		New Mexico Border - LCR
10	Little Colorado River	Turbidity	Nutrioso Creek - Carnero Creek
11	Little Colorado River	Turbidity	Water Canyon - Nutrioso Creek
12	Little Colorado River	Turbidity	West Fork LCR - Water Canyon
13	Little Colorado River	Turbidity	Coyote Creek - Lyman Lake
14	Rainbow Lake	Low DO	
15	Rainbow Lake	high pH	
16	Rainbow Lake	Nutrients	
17	Big Bug Creek	Suspected Metals	Eugene Gulch- Agua Fria River
18	~~Painted Rock Barrow Pit~~	~~Pesticides~~	-
19	~~Painted Rock Reservoir~~	~~Pesticides~~	-
20	~~Gila River~~	~~Pesticides~~	~~Gillespie Dam - Rainbow Wash~~
21	~~Gila River~~	~~Pesticides~~	~~Sand Tank - Painted Rock Reservoir~~
22	~~Gila River~~	~~Pesticides~~	~~Rainbow Wash - Sand Tank~~
23	~~Gila River~~	~~Pesticides~~	~~Salt River - Agua Fria River~~
24	~~Gila River~~	~~Pesticides~~	~~Agua Fria River - Waterman Wash~~
25	~~Gila River~~	~~Pesticides~~	~~Centennial Wash - Gillespie Dam~~
26	Gila River	Selenium	Centennial Wash - Gillespie Dam
27	Gila River	Boron	Centennial Wash - Gillespie Dam
28	~~Gila River~~	~~Pesticides~~	~~Hassaympa River - Centennial Wash~~
29	~~Gila River~~	~~Pesticides~~	~~Waterman Wash - Hassayampa River~~
30	~~Hassayampa River~~	~~Pesticides~~	~~Buckeye Canal - Gila River~~
31	~~Salt River~~	~~Pesticides~~	~~23rd Ave WWTP - Gila River~~
32	Turkey Creek	Copper	Tributary 341928/1122128 - Poland Creek
33	Turkey Creek	Lead	Tributary 341928/1122128 - Poland Creek
34	Alum Gulch	Cadmium	Headwaters - 312820 / 1104351
35	Alum Gulch	Copper	Headwaters - 312820 / 1104351
36	Alum Gulch	Low pH	Headwaters - 312820 / 1104351
37	Alum Gulch	Zinc	Headwaters - 312820 / 1104351
38	Alum Gulch	Cadmium	312917/1104425 - Sonoita Creek
39	Alum Gulch	Copper	312917/1104425 - Sonoita Creek
40	Alum Gulch	Low pH	312917/1104425 - Sonoita Creek

41	Alum Gulch	Zinc	312917/1104425 - Sonoita Creek
42	Alum Gulch	Cadmium	312820/1104351 - 312917/1104425
43	Alum Gulch	Copper	312820/1104351 - 312917/1104425
44	Alum Gulch	Low pH	312820/1104351 - 312917/1104425
45	Alum Gulch	Zinc	312820/1104351 - 312917/1104425
46	Humboldt Canyon	Cadmium	Headwaters - Alum Gulch
47	Humboldt Canyon	Copper	Headwaters - Alum Gulch
48	Humboldt Canyon	Low pH	Headwaters - Alum Gulch
49	Humboldt Canyon	Zinc	Headwaters - Alum Gulch
50	Pena Blanca Lake	Mercury	
51	Potrero Creek	Chlorine	Interstate 19 - Santa Cruz River
52	Potrero Creek	Low dissolved oxygen	Interstate 19 - Santa Cruz River
53	Potrero Creek	*E. coli*	Interstate 19 - Santa Cruz River
54	Santa Cruz River	Ammonia	Roger Road WWTP outfall - Intermittent Reach
55	Santa Cruz River	Copper (dissolved)	HUC 15050303 Boundary - Baum
56	Santa Cruz River	Ammonia	Josephine Canyon - Tubac Bridge
57	Santa Cruz River	*E. coli*	Josephine Canyon - Tubac Bridge
58	Santa Cruz River	Ammonia	Canada del Oro - HUC 15050303
59	Santa Cruz River	Chlorine	Nogales WWTP - Josephine Canyon
60	Santa Cruz River	Ammonia	Nogales WWTP - Josephine Canyon
61	Santa Cruz River	*E. coli*	Nogales WWTP - Josephine Canyon
62	Mule Gulch	Copper (dissolved)	Lavender Pit - Bisbee WWTP discharge
63	~~Mule Gulch~~	~~low pH~~	~~Lavender Pit - Bisbee WWTP discharge~~
64	Mule Gulch	Copper (dissolved)	Headwaters - Lavender Pit
65	Mule Gulch	Copper (dissolved)	Bisbee WWTP Discharge - Highway 80 bridge
66	~~Mule Gulch~~	~~Cadmium (dissolved)~~	~~Bisbee WWTP Discharge - Highway 80 bridge~~
67	~~Mule Gulch~~	~~Zinc (dissolved)~~	~~Bisbee WWTP Discharge - Highway 80 bridge~~
68	~~Mule Gulch~~	~~Low pH~~	~~Bisbee WWTP Discharge - Highway 80 bridge~~
69	Brewery Gulch	Copper (dissolved)	Headwaters to Mule Gulch
70	San Pedro River	*E. coli*	Babocomari River - Dragoon Wash
71	Christopher Creek	Phosphorus	Headwaters - Tonto Creek
72	Christopher Creek	*E. coli*	Headwaters - Tonto Creek
73	Christopher Creek	Nitrogen	Headwaters - Tonto Creek
74	Five Point Mountain Tributary	Copper (dissolved)	Headwaters To Pinto Creek
75	Gibson Mine Tributary	Copper (dissolved)	Headwaters To Pinto Creek
76	Pinto Creek	Copper (dissolved)	West Fork Pinto Creek - Roosevelt Lake
77	Pinto Creek	Copper (dissolved)	Headwaters - Tributary at 331927/1105456
78	Pinto Creek	Copper (dissolved)	Trib at 331927/1105456 - West Fork Pinto Creek
79	Tonto Creek	Low dissolved oxygen	Headwaters - Tributary at 34180/1110414
80	Tonto Creek	Nutrients	Headwaters - Tributary at 34180/1110414
81	Tonto Creek	*E. coli*	Headwaters - Tributary at 34180/1110414
82	Tonto Creek	Nutrients	Tributary at 341810/1110414 - Haigler Creek
83	Tonto Creek	*E. coli*	Tributary at 341810/1110414 - Haigler Creek
84	Blue River	*E. coli*	Strayhorse Creek - San Francisco River

85	Gila River	*E. coli*	Skully Creek - San Francisco River
86	Gila River	*E. coli*	Apache Creek - Skully Creek
87	Gila River	*E. coli*	New Mexico border - Bitter Creek
88	Gila River	SSC	New Mexico border - Bitter Creek
89	Gila River	*E. coli*	Bonita Creek - Yuma Wash
90	Gila River	SSC	Bonita Creek - Yuma Wash
91	Gila River	Lead (total)	Bonita Creek - Yuma Wash
92	San Francisco River	*E. coli*	Limestone Gulch - Gila River
93	San Francisco River	*E. coli*	Blue River - Limestone Gulch
94	~~East Verde~~	~~Boron~~	~~American Gulch- Verde River~~
95	Granite Creek	Low dissolved oxygen and *E. coli*	Headwaters - YPIT boundary
96	Granite Creek	*E. coli*	YPIT to Watson Lake
97	Miller Creek	*E. coli*	Headwaters to Granite Creek
98	Butte Creek	*E. coli*	Headwaters to Miller Creek
99	Manzanita Creek	*E. coli*	Headwaters to Granite Creek
100	Oak Creek	*E. coli*	West Fork Oak Creek - Trib at 345709/1114513
101	Oak Creek	*E. coli*	Headwaters - W. Fork Oak Creek
102	Oak Creek	*E. coli*	Slide Rock SP - Dry Creek
103	Oak Creek	*E. coli*	Trib at 345709/1114513 - Slide Rock SP
104	Oak Creek	*E. coli*	Dry Creek - Spring Creek
105	Spring Creek	*E. coli*	Coffee Creek - Oak Creek
106	Watson Lake	Nitrogen	
107	Watson Lake	Low dissolved oxygen	
108	Watson Lake	High pH	

Appendix B: WQIG Projects Awarded in FY16

Watershed	WQIG#	Project Title	Grantee	NPS Funded Amount	Project Start Date
Little Colorado	17-001	Apache NRCD Little Colorado River Improvement Projects	Apache Natural Resource Conservation District (ANRCD)	$195,851.00	4/7/2016
San Pedro	18-001	Horseshoe Draw Flood and Erosion Control to Reduce Sediment and E.coli Transport to the San Pedro River	Hereford Natural Resource District	$993,880.00	6/29/2016
Upper Gila	18-002	San Francisco and Blue Rivers E. coli Reduction	Gila Watershed Partnership	$193,292.00	6/10/2016
Verde	18-003	Slaughterhouse Gulch Channel Restoration and Water Quality Improvements	Prescott Creeks Preservation Association	$374,394.30	6/23/2016
San Pedro	18-004	Sheet Erosion and E. coli Mitigation on Sands Ranch, San Pedro River Uplands	Borderlands Restoration	$130,500.00	6/13/2016
Verde	18-005	Oak Creek Erosion Control-Schnebly Hill Road	National Forest Foundation	$50,000.00	6/10/2016
San Pedro	18-006	Erosion Control, Sediment Retention and Riparian Restoration in the Babocomari River Watershed	Borderlands Restoration	$117,291.00	6/13/2016
San Pedro	18-007	Running N Bar Ranch	Running N Bar	$60,291.54	6/29/2016

TOTAL Awarded in FY16: $2,115,499.84